

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

5 Listing of Claims:

Claim 1 (currently amended): A method for determining a motion vector of a current block of a current frame for indicating a region in a reference frame comprising pixel information correlating to the current block, the current frame and reference frame being part of a sequence of frames forming a digital video, the method comprising:

- 10 correlating pixel information of the current block with pixel information of the reference frame indicated by a first motion vector of a block proximate to the current block to determine a first cost function;
- correlating pixel information of the current block with pixel information of the reference frame indicated by a second motion vector to determine a second
- 15 cost function, the second motion vector being of a block of the reference frame spatially coincident with the current block;
- correlating pixel information of the current block with pixel information of at least a predetermined region of the reference frame to determine at least a third motion vector and corresponding third cost function;
- 20 selecting at least one of the first, second, and third motion vectors having the lowest cost function as a candidate motion vector;
- correlating pixel information of the current block with pixel information of regions_offset from regions in the reference frame indicated by the candidate motion vectors to determine refined candidate motion vectors
- 25 and corresponding refined cost functions; and
- selecting the refined candidate motion vector having the lowest refined cost function as the motion vector of the current block.

Claim 2 (original): The method of claim 1 wherein correlation of pixel information is performed according to a sum of absolute differences or a sum of squared differences function.

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Claim 3 (original): The method of claim 1 wherein a plurality of proximate blocks are correlated with, and the first motion vector and first cost function are selected from the proximate block having the lowest cost function.

10 Claim 4 (original): The method of claim 1 wherein a plurality of proximate blocks are correlated with, and the first motion vector and first cost function are selected from the proximate block having the lowest cost function, a mean motion vector of the proximate blocks being selected as the first motion vector if the corresponding mean cost function is the lowest cost function.

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Claim 5 (original): The method of claim 1 wherein two of the first, second, and third motion vectors having the lowest cost functions are selected as candidate motion vectors.

20 Claim 6 (currently amended): The method of claim 5 wherein nine predetermined regions are correlated with and two third motion vectors and corresponding third cost functions are determined.

25 Claim 7 (original): The method of claim 6 wherein the two third motion vectors are selected from two regions of the nine predetermined regions having the lowest cost functions of correlation with the current block.

Claim 8 (original): The method of claim 1 wherein the first and second motion vectors are

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only under consideration for selection as the candidate motion vectors when the respective first and second cost functions are below a predetermined threshold.

5 Claim 9 (original): The method of claim 1 wherein determining the refined candidate motion vectors and corresponding refined cost functions is iteratively performed twice.